What are the Effects of Climate-Related Risks on Public Health?

A summary of National Climate Assessment information from the U.S. Global Change Research Program about the public health risks associated with climate change.

Human Health Risks Posed by Climate Change – Examples from the Third National Climate Assessment

- **Heat-related illness**: Heat waves are expected to become more frequent and severe, which may result in heat-related illnesses such as heat stroke or death.
- **Mental health and stress-related disorders**: An increase in the frequency of extreme weather events may result in a greater number of people experiencing mental health issues.
- **Respiratory impacts**: Increased allergies and more frequent and severe asthma attacks may occur as a result of longer pollen seasons and increased temperatures.
- **Food-borne and water-borne illness**: Rising temperatures may increase the growth of certain pathogens in food and water, such as salmonella.
- **Tick-borne and other diseases**: The habitats of certain disease carriers—such as ticks, mosquitoes, and foxes—may expand, bringing with them diseases such as Lyme disease and dengue.
- **Injuries**: Extreme weather events are expected to become more frequent and severe, increasing the potential for injury due to falls and drowning.
- **West Nile virus**: May pose greater threats as suitable habitats for disease-carrying mosquitoes increase.
- **Drownings and injuries**: May result from floods, which could become more common as the frequency and intensity of extreme precipitation events increase.
- **Respiratory and cardiovascular diseases**: Could be worsened by smoke and particulate pollution from increased wildfires.
- **The incidence of heat stress and other illnesses aggravated by extreme heat, such as heart disease, need increase as temperatures rise.**
- **Water-borne illnesses**: May result from disruptions to community water supplies and sewage systems as permafrost—frozen ground that can support infrastructure—continues to thaw.
- **The incidence of dengue could increase under projected climatic conditions which include warmer temperatures and shifting rainfall patterns.**
- **Heat-related illness**: May occur at higher rates in cities, where the abundance of concrete and relative lack of vegetation can cause temperatures to rise higher than in surrounding areas.
- **The incidence of food-borne illness**: Could increase as algae that cause the illness move northward with rising sea surface temperatures.
- **Allergies**: May become more common and severe as pollen seasons grow longer due to more frost-free days.
- **The incidence of heat stress and other illnesses aggravated by extreme heat, such as heart disease, need increase as temperatures rise.**

The Third National Climate Assessment Reports that Health Impacts from Climate Change are Expected to Vary Across Populations and Regions

Climate change is expected to exacerbate existing health disparities, especially for groups such as the elderly, children, those that are sick, and those that are living in poverty.

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